

# PATENT ABSTRACTS OF JAPAN

(11)Publication number : 64-061601

(43)Date of publication of application : 08.03.1989

(51)Int.Cl.

G01B 11/00

G01M 11/00

G02B 7/11

(21)Application number : 62-218546

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(22)Date of filing : 01.09.1987

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## (54) DETECTING DEVICE FOR LENS DISPLACEMENT QUANTITY

### (57)Abstract:

**PURPOSE:** To enable noncontact measurement and to eliminate the danger of damage to a lens by constituting the noncontact type lens displacement quantity detecting device which measures reflected light from the lens surface and measures the extension quantity of the lens.

**CONSTITUTION:** A focus lens 12 or a camera 10 set at a reference position A is arranged in front of the objective 20 of the lens displacement quantity detecting device. Then the distance to an object is measured by the range finder incorporated in the camera, the camera 10 whose focus lens 12 is already moved to a focus position B according to the distance data is arranged in front of the objective 20, and the objective 20 is moved to photodetect reflected light from the lens 12 by a photodetection sensor 18, so that the position of the largest quantity of photodetection is determined corresponding to the pulse code of a pulse encoder 40 and stored in the register of a CPU 32. The CPU 32 calculates the difference between both the positions of the lenses 12 and 20 from the code difference of the pulse encoder 40. The actual movement quantity of the focus lens is compared with an ideal quantity to know the accuracy of the range finder, and a measurement is taken without contacting the focus lens 12 to be inspected.

